OCCUPATIONAL INJURIES AND DISEASES IN **ALBERTA**

Lost-Time Claims and Claim Rates

Upstream Oil & Gas Industries

2000 to 2004

Released July 2005

WORK SAFE ALBERTA

Alberta HUMAN RESOURCES AND EMPLOYMENT

the people & workplace department

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HIGHLIGHTS

From 2000 to 2004...

- There were 7,226 lost-time claims from workers in the Upstream Oil and Gas industries. Of those, 34.4% involved Downhole and Other Oilfield Services, 16.2% Drilling of Oil and Gas Wells, and 14.5% Oilfield Trucking Services.
- Sprains, strains and tears were the most common nature of injury, accounting for 36.4% of the total lost-time claims.
- The trunk was the most common body part injured, accounting for over one-third of all claims.
- Nearly thirty percent of incidents involved overexertion or being struck by objects.
- More than half of the injured workers were 25 to 44 years of age.
- More than a quarter of claims resulted in 51 days or more off work.

In 2004...

- The Workers' Compensation Board – Alberta (WCB) accepted 1,402 lost-time claims from Upstream Oil and Gas workers, representing 4.0% of all lost-time claims in the province.
- The lost-time claim rate for the Upstream Oil and Gas industries was 1.4 per 100 person-years, a 17.6% decrease from the 2003 rate of 1.7. The 2004 provincial lost-time claim rate was 2.6 per 100 person-years.
- The duration rate for the Upstream Oil and Gas industries was 51 days lost per 100 person-years compared to the provincial rate of 65 per 100 person-years.
- The Petroleum Producers/Exploration sub-sector had the lowest lost-time claim rate of all Upstream Oil and Gas sub-sectors, at 0.4 per 100 person-years. Oilfield Trucking Services had the highest lost-time claim rate, at 5.5 per 100 person-years.
- Employers with 20 to 39 person-years had the highest lost-time claim rate of 2.5 per 100 person-years.

- Over seven percent of all employers in the Upstream Oil and Gas industries had a valid Certificate of Recognition (COR).

- The WCB accepted 14 occupational fatalities for compensation in the Upstream Oil and Gas industries, representing 11.3% of all workplace fatalities accepted in Alberta.

SECTION 1

INTRODUCTION

Role of Alberta Human Resources and Employment

Alberta Human Resources and Employment (AHRE) invests in people and fosters safe and productive workplaces. AHRE develops and delivers programs and services which contribute to workplaces that are safe, healthy, fair and stable for workers and employers by:

- Working with industry and safety associations to audit and certify health and safety programs.
- Helping employers, workers, unions and industry associations work together by offering facilitation services, workshops and partnership opportunities.
- Developing and maintaining policy and legislated standards in Alberta.
- Preparing and providing ongoing support of Alberta's workplace health and safety legislation.
- Explaining legislated standards under the Occupational Health and Safety Act and the Employment Standards Code and ensuring compliance through complaint resolution, investigation and targeted inspections.

Occupational Injuries and Diseases in Upstream Oil and Gas Industries 2000 to 2004

Each year, AHRE prepares a report on the occupational injuries and diseases in the Upstream Oil and Gas industries to provide a detailed review of workplace health and safety. The purpose of this report is to provide government, employers, workers, and health and safety professionals in the Upstream Oil and Gas industries with information about key health and safety issues. This report includes:

- An estimation of the risk of injury or disease (lost-time claim rate) in addition to general descriptive information about incidents and injured workers.
- The number of employers that earned a Certificate of Recognition (COR).
- Occupational fatalities accepted by the WCB for compensation and fatality rates for the Upstream Oil and Gas industries.

Notes about this report:

- While this report focuses on 2004 data, information for 2000 to 2003 is also provided for comparison.
- Lost-time claim rate based on a few person-years is too volatile to make a valid comparison; therefore lost-time claim rate is not calculated when there are fewer than 40 person-years.
- Duration rate is highly unstable when based on a few lost-time claims. Duration rate is not calculated when there are fewer than 30 lost-time claims.
- Percentages may not add up to 100 because of rounding.
- Terms, definitions and formulas are described in Appendix A. Industry codes are listed in Appendix B.

SECTION 2

LOST-TIME CLAIM RATE AND DURATION RATE

The lost-time claim rate[1] represents the probability or risk of a disabling injury or disease to a worker during a period of one year. The 2004 lost-time claim rate for the Upstream Oil and Gas industries was 1.4 per 100 person-years.

In 2004, there were 1,402 lost-time claims in the Upstream Oil and Gas industries, representing 4.0% of the total lost-time claims in the province. The Upstream Oil and Gas industries' lost-time claim rate was 1.4 per 100 person-years, a 17.6% decrease from 2003 (see Table 2.0). The 2004 provincial lost-time claim rate was 2.6 per 100 person-years. The lost-time claim rate of 1.4 per 100 person-years translates to seven lost-time claims per million hours worked.

The duration rate is intended to show the severity of the effects of occupational injury and disease as reflected by the number of days off work per 100 person-years. In 2004, the Upstream Oil and Gas industries had a duration rate of 51, a 25.0% decrease from the 2003 rate of 68 and 21.5% lower than the provincial rate of 65.

Table 2.0
Upstream Oil and Gas Industries — Alberta: 2000-2004

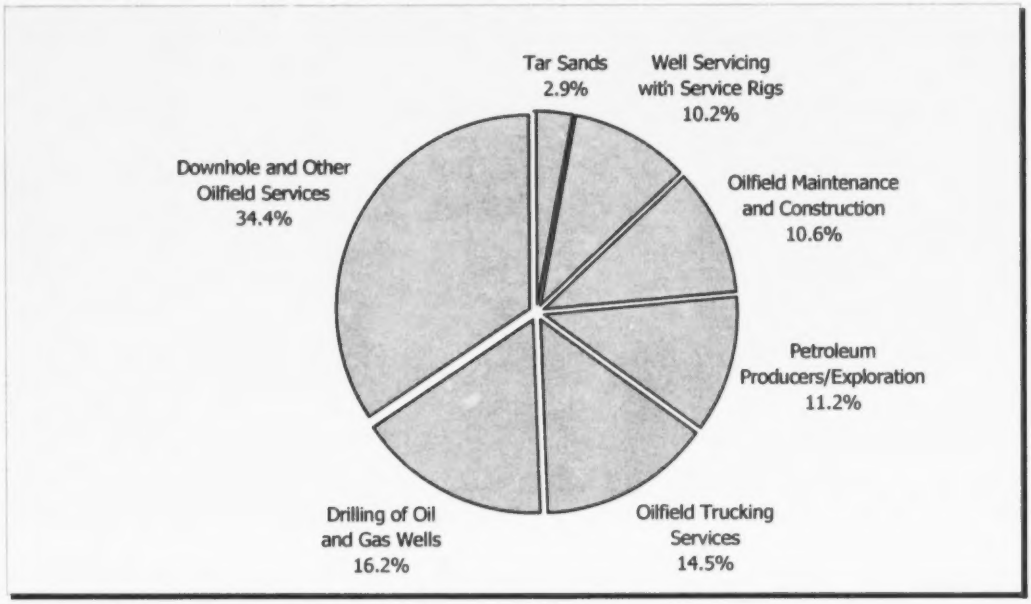
Year	Number of Accounts	Cost of Claims	Person-Years	Days Lost	Duration Rate	Lost-Time Claims	Lost-Time Claim Rate
2000	8,463	$12,940,332	73,071	65,780	90	1,544	2.1
2001	9,286	$13,856,466	84,153	69,480	83	1,490	1.8
2002	9,856	$12,769,129	87,492	55,664	64	1,222	1.4
2003	10,792	$16,113,896	90,954	61,586	68	1,568	1.7
2004	**11,995**	**$14,946,331**	**100,926**	**51,577**	**51**	**1,402**	**1.4**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

[1] The rate has been calculated from lost-time claims data as of March 31, 2005. This rate underestimates the risk of occupational injury and disease since some lost-time claims that occurred in 2004 were not administered by March 31, 2005.

Between 2000 and 2004, there were 7,226 lost-time claims in the Upstream Oil and Gas industries. The Downhole and Other Oilfield Services sub-sector accounted for more than one-third of total lost-time claims, followed by the Drilling of Oil and Gas Wells sub-sector, at 16.2%. The Tar Sands sub-sector experienced the fewest lost-time claims, at 2.9% (see Chart 2.0).

Chart 2.0
Lost-Time Claims by Upstream Oil and Gas Sub-Sector — Alberta: 2000-2004



Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

2.1 Lost-Time Claim Rate by Size of Employer

In the Upstream Oil and Gas industries, employers with 20 to 39 person-years had the highest lost-time claim rate at 2.5, followed by employers with 10 to 19 person-years and 40 to 99 person-years at 2.0. Employers with 100 or more person-years had the lowest claim rate at 1.1 (see Table 2.1). For the province, employers with 20 to 39 and 40 to 99 person-years had the highest lost-time claim rate while employers with less than 10 person-years had the lowest.

Table 2.1
Lost-Time Claim Rate by Size[2] of Employer — Alberta: 2004

Size of Employer	Number of Accounts	Lost-Time Claims	Person-Years	Lost-Time Claim Rate
Less than 10 person-years	11,035	205	12,534	1.6
10 to 19 person-years	346	97	4,883	2.0
20 to 39 person-years	222	158	6,267	2.5
40 to 99 person-years	155	184	9,189	2.0
100 or more person-years	138	736	68,052	1.1
Unspecified	99	22	0	N/A [1]

[1] The lost-time claim rate based on a few person-years is too volatile to make a valid comparison; therefore the lost-time claim rate is not calculated when there are fewer than 40 person-years.

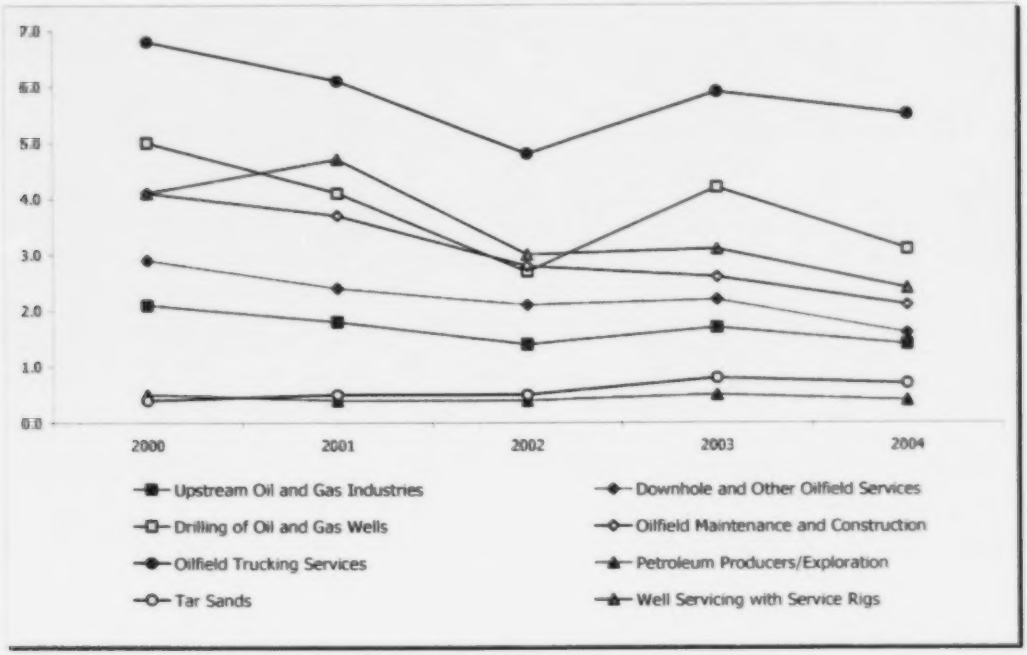
Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

[2] Size is measured in terms of person-years.

2.2 Lost-Time Claims by Upstream Oil and Gas Sub-Sector

Between 2000 and 2004, the Oilfield Trucking Services sub-sector had the highest lost-time claim rate. The Petroleum Producers/Exploration sub-sector had the lowest rate in each year except in 2000 (see Chart 2.2).

Chart 2.2
Lost-Time Claim Rate by Upstream Oil and Gas Sub-Sector — Alberta: 2000-2004



Sub-Sector	2000	2001	2002	2003	2004
Upstream Oil and Gas Industries	2.1	1.8	1.4	1.7	**1.4**
Petroleum Producers/Exploration	0.5	0.4	0.4	0.5	**0.4**
Oilfield Maintenance and Construction	4.1	3.7	2.8	2.6	**2.1**
Well Servicing with Service Rigs	4.1	4.7	3.0	3.1	**2.4**
Drilling of Oil and Gas Wells	5.0	4.1	2.7	4.2	**3.1**
Downhole and Other Oilfield Services	2.9	2.4	2.1	2.2	**1.6**
Tar Sands	0.4	0.5	0.5	0.8	**0.7**
Oilfield Trucking Services	6.8	6.1	4.8	5.9	**5.5**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

2.2A Petroleum Producers/Exploration

The lost-time claim rate in the Petroleum Producers/Exploration sub-sector was 0.4 per 100 person-years in 2004, the lowest of all sub-sectors in the Upstream Oil and Gas industries. The duration rate fell by 46.2% to seven days lost per 100 person-years, also the lowest of all sub-sectors (see Table 2.2A).

Table 2.2A
Petroleum Producers/Exploration — Alberta: 2000-2004

Year	Number of Accounts	Cost of Claims	Person-Years	Days Lost	Duration Rate	Lost-Time Claims	Lost-Time Claim Rate
2000	2,773	$1,642,134	31,512	5,263	17	170	0.5
2001	2,973	$1,186,632	38,517	5,160	13	162	0.4
2002	3,152	$1,073,138	38,261	4,885	13	137	0.4
2003	3,568	$2,263,476	38,871	5,135	13	190	0.5
2004	**4,005**	**$1,256,866**	**42,246**	**3,141**	**7**	**151**	**0.4**

Data Source: 2004 WCB Data. Prepared by Data Development and Evaluation

2.2B Oilfield Maintenance and Construction

In 2004, the Oilfield Maintenance and Construction sub-sector experienced a 19.2% decrease in the lost-time claim rate from 2.6 to 2.1 per 100 person-years. The duration rate decreased from 89 in 2003 to 59 days lost per 100 person-years in 2004, the lowest in the past five years (see Table 2.2B).

Table 2.2B
Oilfield Maintenance and Construction — Alberta: 2000-2004

Year	Number of Accounts	Cost of Claims	Person-Years	Days Lost	Duration Rate	Lost-Time Claims	Lost-Time Claim Rate
2000	929	$1,039,838	4,292	6,301	147	176	4.1
2001	953	$1,111,624	4,672	6,800	146	175	3.7
2002	959	$857,321	5,266	5,268	100	146	2.8
2003	987	$886,140	5,567	4,964	89	144	2.6
2004	**1,052**	**$695,765**	**5,856**	**3,447**	**59**	**124**	**2.1**

Data Source: 2004 WCB Data. Prepared by Data Development and Evaluation

2.2C Well Servicing with Service Rigs

In 2004, the Well Servicing with Service Rigs sub-sector experienced decreases in both its lost-time claim rate and duration rate. The lost-time claim rate fell 22.6% from 3.1 to 2.4, and the duration rate decreased by 34.7% from 190 to 124 days lost per 100 person-years (see Table 2.2C).

Table 2.2C
Well Servicing with Service Rigs — Alberta: 2000-2004

Year	Number of Accounts	Cost of Claims	Person-Years	Days Lost	Duration Rate	Lost-Time Claims	Lost-Time Claim Rate
2000	119	$1,691,165	3,989	7,390	185	163	4.1
2001	116	$1,762,787	3,810	9,254	243	180	4.7
2002	116	$1,554,116	4,107	7,213	176	122	3.0
2003	126	$2,301,992	4,703	8,940	190	146	3.1
2004	**138**	**$1,859,514**	**5,231**	**6,484**	**124**	**124**	**2.4**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

2.2D Drilling of Oil and Gas Wells

Drilling of Oil and Gas Wells experienced a 26.2% decrease in the lost-time claim rate from 4.2 in 2003 to 3.1 in 2004. The duration rate in 2004 was 160 per 100 person-years, a 22.7% decrease from 2003 (see Table 2.2D).

Table 2.2D
Drilling of Oil and Gas Wells — Alberta: 2000-2004

Year	Number of Accounts	Cost of Claims	Person-Years	Days Lost	Duration Rate	Lost-Time Claims	Lost-Time Claim Rate
2000	88	$3,206,349	5,707	17,454	306	287	5.0
2001	92	$3,563,783	6,012	12,324	205	245	4.1
2002	96	$2,574,130	5,501	9,562	174	149	2.7
2003	114	$4,042,612	6,252	12,913	207	263	4.2
2004	**126**	**$4,236,903**	**7,289**	**11,685**	**160**	**225**	**3.1**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

2.2E Downhole and Other Oilfield Services

In 2004, the lost-time claim rate for Downhole and Other Oilfield Services was 1.6 per 100 person-years, down from 2.2 in 2003. The duration rate was 53 days lost per 100 person-years, the lowest in the past five years and a decrease of 28.4% from 2003 (see Table 2.2E).

Table 2.2E
Downhole and Other Oilfield Services — Alberta: 2000-2004

Year	Number of Accounts	Cost of Claims	Person-Years	Days Lost	Duration Rate	Lost-Time Claims	Lost-Time Claim Rate
2000	3,802	$3,496,314	18,023	19,819	110	514	2.9
2001	4,325	$4,421,309	21,123	24,642	117	498	2.4
2002	4,678	$4,952,594	21,347	19,938	93	457	2.1
2003	5,109	$4,196,576	24,853	18,387	74	539	2.2
2004	**5,713**	**$4,267,290**	**29,206**	**15,402**	**53**	**480**	**1.6**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

2.2F Tar Sands

In 2004 the lost-time claim rate for the Tar Sands sub-sector fell from 0.8 to 0.7 per 100 person-years. The duration rate fell from 14 to 10 days lost per 100 person-years. Both the duration rate and lost-time claim rate were the second lowest of all sub-sectors in the Upstream Oil and Gas industries (see Table 2.2F).

Table 2.2F
Tar Sands — Alberta: 2000-2004

Year	Number of Accounts	Cost of Claims	Person-Years	Days Lost	Duration Rate	Lost-Time Claims	Lost-Time Claim Rate
2000	15	$486,720	6,485	725	N/A	26	0.4
2001	19	$136,783	6,842	338	5	35	0.5
2002	26	$251,577	9,567	588	6	46	0.5
2003	31	$499,659	6,831	936	14	57	0.8
2004	**49**	**$333,548**	**6,559**	**668**	**10**	**49**	**0.7**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

2.2G Oilfield Trucking Services

The lost-time claim rate for Oilfield Trucking Services was 5.5 per 100 person-years in 2004, which was a decrease of 6.8% from 5.9 in 2003. The duration rate fell by 10.9% from 266 in 2003 to 237 days lost per 100 person-years in 2004 (see Table 2.2G).

Table 2.2G
Oilfield Trucking Services — Alberta: 2000-2004

Year	Number of Accounts	Cost of Claims	Person-Years	Days Lost	Duration Rate	Lost-Time Claims	Lost-Time Claim Rate
2000	737	$1,377,812	3,063	8,828	288	208	6.8
2001	808	$1,673,549	3,178	10,962	345	195	6.1
2002	829	$1,506,252	3,442	8,210	239	165	4.8
2003	857	$1,923,441	3,877	10,311	266	229	5.9
2004	**912**	**$2,296,444**	**4,539**	**10,750**	**237**	**249**	**5.5**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

SECTION 3

INJURY AND DISEASE ANALYSIS

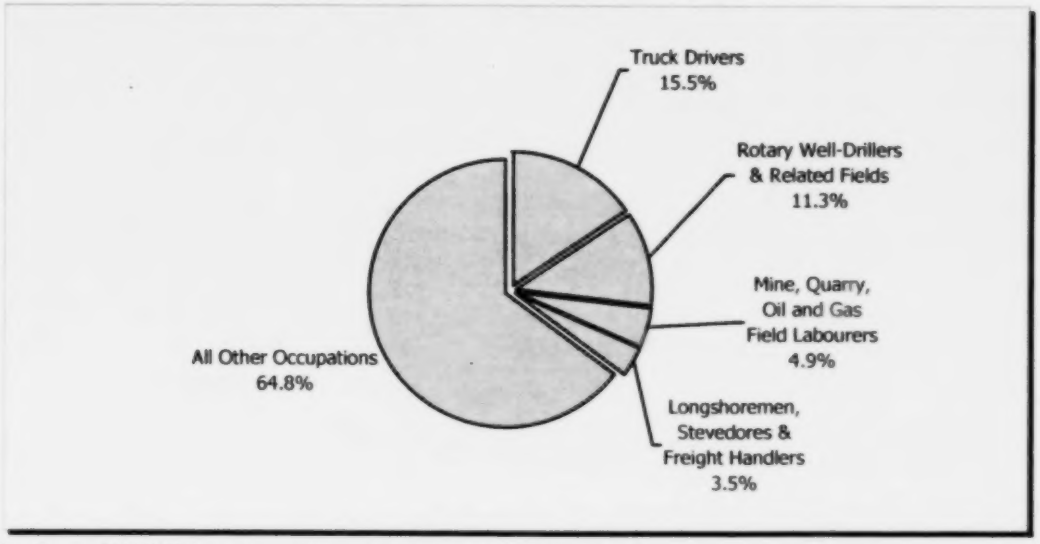
Being struck by objects and overexertion were the most common causes of lost-time claims in the Upstream Oil and Gas industries. Sprains, strains and tears continued to be the leading nature of injury with the trunk being the most commonly injured body part.

This section describes the characteristics of the injured workers and the nature of their injuries or diseases. Tables are provided to enable comparisons of 2004 injuries and diseases in Upstream Oil and Gas industries with provincial averages and trends. A detailed explanation of the formulas for calculating the indicators of the comparison tables is available in Appendix A.

3.1 Injured Worker Characteristics

In 2004, four occupations accounted for 35.2% of total claims in the Upstream Oil and Gas industries. Truck drivers had the most claims at 15.5%, followed by rotary well-drillers and related fields at 11.3% (see Chart 3.1A).

Chart 3.1A
Lost-Time Claims by Occupation — Alberta: 2004



Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

Between 2000 and 2004, more than half of claims were from workers aged 25 to 44 years. Young workers aged 15 to 24 accounted for 25.9% of total claims, while workers aged 45 years and older had 16.6% of claims (see Table 3.1A).

Table 3.1A
Lost-Time Claims by Age — Alberta: 2000-2004

Age	2000	2001	2002	2003	2004	Total Lost-Time Claims	%
15 – 19 Years	103	90	56	94	**68**	411	5.7%
20 – 24 Years	331	320	214	325	**271**	1,461	20.2%
25 – 34 Years	531	503	410	520	**463**	2,427	33.6%
35 – 44 Years	369	359	325	364	**295**	1,712	23.7%
45 – 54 Years	152	149	154	191	**203**	849	11.7%
55 – 64 Years	45	55	46	60	**74**	280	3.9%
65 Years and Over	10	10	14	13	**28**	75	1.0%
Unspecified	3	4	3	1	**0**	11	0.2%
Total	**1,544**	**1,490**	**1,222**	**1,568**	**1,402**	**7,226**	**100.0%**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

In the Upstream Oil and Gas industries, the majority of lost-time claims were from men. Between 2000 and 2004, 94.3% of claims involved men. Lost-time claims from women accounted for 3.6% (see Table 3.1B).

Table 3.1B
Lost-Time Claims by Gender — Alberta: 2000-2004

Gender	2000	2001	2002	2003	2004	Total Lost-Time Claims	%
Men	1,476	1,411	1,132	1,463	**1,329**	6,811	94.3%
Women	51	52	55	66	**38**	262	3.6%
Unspecified	17	27	35	39	**35**	153	2.1%
Total	**1,544**	**1,490**	**1,222**	**1,568**	**1,402**	**7,226**	**100.0%**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

3.2 Nature of Injury or Disease

The nature of injury is used to identify the physical characteristics of the injury or disease. Between 2000 and 2004, 88.8% of all the lost-time claims were caused by traumatic injuries and disorders. The four most common traumatic injuries and disorders were: sprains, strains and tears, 36.4%; fractures and dislocations, 19.2%; surface wounds and bruises, 10.6%; and open wounds, 7.0% (see Table 3.2A).

Table 3.2A
Nature of Injury or Disease — Alberta: 2000-2004

Nature of Injury or Disease	2000	2001	2002	2003	2004	Total Lost-Time Claims	%
Traumatic Injuries and Disorders	**1,421**	**1,342**	**1,057**	**1,370**	**1,227**	**6,417**	**88.8%**
Sprains, Strains and Tears	572	509	469	577	506	2,633	36.4%
Fractures and Dislocations	314	305	226	277	269	1,391	19.2%
Surface Wounds and Bruises	187	170	108	154	145	764	10.6%
Open Wounds	111	121	72	108	93	505	7.0%
Burns	63	63	37	66	55	284	3.9%
Other Traumatic Injuries and Disorders	174	174	145	188	159	840	11.6%
Systemic Diseases and Disorders	**86**	**73**	**71**	**115**	**119**	**464**	**6.4%**
Other Diseases, Conditions and Disorders	**4**	**5**	**7**	**3**	**11**	**30**	**0.4%**
Symptoms, Signs and Ill-Defined Conditions	**2**	**4**	**3**	**3**	**3**	**15**	**0.2%**
Infectious and Parasitic Diseases	**2**	**0**	**2**	**2**	**0**	**6**	**0.1%**
Multiple Diseases, Conditions and Disorders	**0**	**1**	**1**	**0**	**0**	**2**	**< 0.1%**
Neoplasms, Tumors and Cancer	**0**	**0**	**0**	**1**	**1**	**2**	**< 0.1%**
Nature of Injury - Unknown	**29**	**65**	**81**	**74**	**41**	**290**	**4.0%**
Total	**1,544**	**1,490**	**1,222**	**1,568**	**1,402**	**7,226**	**100.0%**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

In 2004, sprains, strains and tears accounted for 36.1% of all claims in the Upstream Oil and Gas industries. This was 0.4 times lower than the average percentage of injuries for this nature of injury category for the whole province. The percentage of injuries in all nature of injury categories for 2004 was lower than or equal to the provincial average, except for other diseases, conditions and disorders which was 1.2 times higher, and fractures and dislocations and neoplasms, tumors and cancer, both of which were 1.1 times higher than the provincial average (see Table 3.2B).

Table 3.2B
Nature of Injury or Disease — Comparison 2004[3]

Nature of Injury or Disease	% of Upstream Oil and Gas Industries' Claims	% of Total Provincial Claims	Number of Times Higher/Lower Than the Provincial Average
Traumatic Injuries and Disorders	**87.5%**	**88.9%**	**0.5**
Sprains, Strains and Tears	36.1%	46.8%	0.4
Fractures and Dislocations	19.2%	8.9%	1.1
Surface Wounds and Bruises	10.3%	11.0%	0.5
Open Wounds	6.6%	8.7%	0.4
Burns	3.9%	2.4%	0.9
Other Traumatic Injuries and Disorders	11.3%	11.0%	0.6
Systemic Diseases and Disorders	**8.5%**	**6.3%**	**0.7**
Other Diseases, Conditions and Disorders	**0.8%**	**0.3%**	**1.2**
Symptoms, Signs and Ill-Defined Conditions	**0.2%**	**0.3%**	**0.4**
Neoplasms, Tumors and Cancer	**0.1%**	**< 0.1%**	**1.1**
Infectious and Parasitic Diseases	**0.0%**	**0.1%**	**n/a**
Nature of Injury - Unknown	**2.9%**	**4.0%**	**0.4**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

[3] Number of Times Higher/Lower Than the Provincial Average: 1 indicates that the injury percentage of the industries is equal to the provincial average; greater than 1 indicates that the injury percentage of the industries is higher than the provincial average; less than 1 indicates that the injury percentage of the industries is lower than the provincial average. See Appendix A for calculation details.

3.3 Part of Body Injured

Between 2000 and 2004, the trunk was the most commonly injured body part, accounting for more than one-third of the total lost-time claims in the Upstream Oil and Gas industries, followed by lower extremities, at 24.4% and upper extremities at 21.4%.

The most common trunk injury was to the back, including spine and spinal cord, representing 19.9% of the total lost-time claims (see Table 3.3A).

Table 3.3A
Part of Body Injured — Alberta: 2000-2004

Part of Body Injured	2000	2001	2002	2003	2004	Total Lost-Time Claims	%
Trunk	**539**	**467**	**411**	**523**	**481**	**2,421**	**33.5%**
Back, Including Spine, Spinal Cord	321	272	244	316	283	1,436	19.9%
Other Trunk	218	195	167	207	198	985	13.6%
Lower Extremities	**395**	**388**	**292**	**368**	**317**	**1,760**	**24.4%**
Leg(s)	173	185	145	185	161	849	11.7%
Ankle(s) and Foot (Feet) Except Toes	187	174	128	153	138	780	10.8%
Other Lower Extremities	35	29	19	30	18	131	1.8%
Upper Extremities	**304**	**341**	**268**	**339**	**292**	**1,544**	**21.4%**
Finger(s), Fingernail(s)	144	162	113	143	113	675	9.3%
Wrist(s) and Hand(s) Except Finger(s)	83	104	76	114	106	483	6.7%
Other Upper Extremities	77	75	79	82	73	386	5.3%
Head	**157**	**128**	**95**	**154**	**155**	**689**	**9.5%**
Eye(s)	58	40	15	54	31	198	2.7%
Other Head Parts	99	88	80	100	124	491	6.8%
Multiple Body Parts	**105**	**124**	**103**	**137**	**110**	**579**	**8.0%**
Neck, Including Throat	**31**	**27**	**24**	**30**	**26**	**138**	**1.9%**
Body Systems	**6**	**11**	**10**	**10**	**14**	**51**	**0.7%**
Part of Body - Unknown	**5**	**4**	**17**	**7**	**5**	**38**	**0.5%**
Other Body Parts	**2**	**0**	**2**	**0**	**2**	**6**	**0.1%**
Total	**1,544**	**1,490**	**1,222**	**1,568**	**1,402**	**7,226**	**100.0%**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

In 2004, the back, including spine and spinal cord accounted for 20.2% of all claims in the Upstream Oil and Gas industries. This was 0.4 times lower than the average percentage of injuries for this part of body category for the whole province. The percentage of injuries in all part of body categories for 2004 was lower than the provincial average except for injuries to other head parts and other body parts (see Table 3.3B).

Table 3.3B
Part of Body Injured — Comparison 2004[4]

Part of Body Injured	% of Upstream Oil and Gas Industries' Claims	% of Total Provincial Claims	Number of Times Higher/Lower Than the Provincial Average
Trunk	**34.3%**	**38.5%**	**0.5**
Back, Including Spine, Spinal Cord	20.2%	25.7%	0.4
Other Trunk	14.1%	12.9%	0.6
Lower Extremities	**22.6%**	**18.9%**	**0.8**
Leg(s)	11.5%	9.4%	0.7
Ankle(s) and Foot (Feet) Except Toes	9.8%	8.3%	0.6
Other Lower Extremities	1.3%	1.2%	0.6
Upper Extremities	**20.8%**	**24.5%**	**0.5**
Finger(s), Fingernail(s)	8.1%	8.0%	0.5
Wrist(s) and Hand(s) Except Finger(s)	7.6%	9.5%	0.4
Other Upper Extremities	5.2%	7.0%	0.4
Head	**11.1%**	**7.5%**	**0.8**
Eye(s)	2.2%	2.8%	0.4
Other Head Parts	8.8%	4.7%	1.0
Multiple Body Parts	**7.8%**	**7.4%**	**0.6**
Neck, Including Throat	**1.9%**	**2.2%**	**0.5**
Body Systems	**1.0%**	**0.6%**	**0.7**
Part of Body - Unknown	**0.4%**	**0.2%**	**0.9**
Other Body Parts	**0.1%**	**0.1%**	**1.1**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

[4] Number of Times Higher/Lower Than the Provincial Average: 1 indicates that the injury percentage of the industries is equal to the provincial average; greater than 1 indicates that the injury percentage of the industries is higher than the provincial average; less than 1 indicates that the injury percentage of the industries is lower than the provincial average. See Appendix A for calculation details.

3.4 Source of Injury or Disease

The source of injury or disease describes the object or substance that the worker came into contact with resulting in an injury or disease. The primary sources of injury for the lost-time claims in the Upstream Oil and Gas industries between 2000 and 2004 were parts and materials, 17.4%; structures and surfaces, 14.7%; and persons, plants, animals and minerals 14.5% (see Table 3.4A).

Table 3.4A
Source of Injury or Disease — Alberta: 2000-2004

Source of Injury or Disease	2000	2001	2002	2003	2004	Total Lost-Time Claims	%
Parts and Materials	**299**	**264**	**167**	**261**	**269**	**1,260**	**17.4%**
Structures and Surfaces	**216**	**211**	**178**	**247**	**207**	**1,059**	**14.7%**
Persons, Plants, Animals and Minerals	**199**	**185**	**182**	**259**	**222**	**1,047**	**14.5%**
Person – Injured or Ill Worker	160	165	167	247	209	948	13.1%
Person – Other Than Injured or Ill Worker [1]	6	2	2	1	2	13	0.2%
Minerals – Metallic and Non-metallic (except fuel)	17	8	8	6	7	46	0.6%
Other Persons, Plants, Animals and Minerals	16	10	5	5	4	40	0.6%
Vehicles	**167**	**169**	**132**	**174**	**152**	**794**	**11.0%**
Tools, Instruments and Equipment	**91**	**96**	**76**	**92**	**77**	**432**	**6.0%**
Hand Tools – Non-powered	49	58	46	51	43	247	3.4%
Hand Tools – Powered	14	8	5	5	10	42	0.6%
Other Tools and Equipments	28	30	25	36	24	143	2.0%
Machinery	**77**	**75**	**58**	**81**	**75**	**366**	**5.1%**
Containers [2]	**64**	**72**	**49**	**63**	**53**	**301**	**4.2%**
Chemicals and Chemical Products	**26**	**20**	**11**	**40**	**21**	**118**	**1.6%**
Furniture and Fixtures	**16**	**15**	**8**	**9**	**8**	**56**	**0.8%**
Other Sources	**118**	**91**	**75**	**134**	**148**	**566**	**7.8%**
Source - Unknown	**271**	**292**	**286**	**208**	**170**	**1,227**	**17.0%**
Total	**1,544**	**1,490**	**1,222**	**1,568**	**1,402**	**7,226**	**100.0%**

[1] Persons – other than injured or ill worker: classifies injuries or illnesses inflicted by family members as well as non-family relations, including co-workers, former co-workers, and patients.
[2] Containers: classifies receptacles that are commonly used to hold, store or carry materials (examples: dishes, cups and glasses, luggage, etc.)

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

In 2004, parts and materials accounted for 19.2% of all claims in the Upstream Oil and Gas industries. This was equal to the average percentage of injuries for this source of injury category for the whole province. The percentage of injuries in all source of injury categories was equal to or lower than the provincial average, except for other sources (see Table 3.4B).

Table 3.4B
Source of Injury or Disease — Comparison 2004[5]

Source of Injury or Disease	% of Upstream Oil and Gas Industries' Claims	% of Total Provincial Claims	Number of Times Higher/Lower Than the Provincial Average
Parts and Materials	**19.2%**	**10.0%**	**1.0**
Persons, Plants, Animals and Minerals	**15.8%**	**25.2%**	**0.3**
Person – Injured or Ill Worker	14.9%	18.4%	0.4
Person – Other Than Injured or Ill Worker	0.1%	4.9%	< 0.1
Minerals – Metallic and Non-metallic (except fuel)	0.5%	0.3%	0.9
Other Persons, Plants, Animals and Minerals	0.3%	1.6%	0.5
Structures and Surfaces	**14.8%**	**15.9%**	**0.5**
Vehicles	**10.8%**	**7.2%**	**0.8**
Tools, Instruments and Equipment	**5.5%**	**6.2%**	**0.5**
Hand Tools – Non-Powered	3.1%	3.3%	0.5
Hand Tools – Powered	0.7%	0.9%	0.4
Other Tools and Equipments	1.7%	2.0%	0.5
Machinery	**5.3%**	**5.7%**	**0.5**
Containers	**3.8%**	**10.1%**	**0.2**
Chemicals and Chemical Products	**1.5%**	**0.9%**	**0.9**
Furniture and Fixtures	**0.6%**	**3.2%**	**0.1**
Other Sources	**10.6%**	**5.3%**	**1.1**
Source - Unknown	**12.1%**	**10.5%**	**0.6**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

[5] Number of Times Higher/Lower Than the Provincial Average: 1 indicates that the injury percentage of the industries is equal to the provincial average; greater than 1 indicates that the injury percentage of the industries is higher than the provincial average; less than 1 indicates that the injury percentage of the industries is lower than the provincial average. See Appendix A for calculation details.

3.5 Type of Event or Exposure

The type of event or exposure describes the incident or event that occurred at the time of the exposure that directly resulted in the injury or disease. The two most common types of event or exposure comprised more than half of the total lost-time claims in the Upstream Oil and Gas industries in the last five years. They are: contact with objects and equipment, 29.0% and bodily reaction and exertion, 27.6% (see Table 3.5A).

Table 3.5A
Type of Event or Exposure — Alberta: 2000-2004

Type of Event or Exposure	2000	2001	2002	2003	2004	Total Lost-Time Claims	%
Contact with Objects and Equipment	**498**	**455**	**313**	**443**	**384**	**2,093**	**29.0%**
Struck by Object	258	253	174	249	205	1,139	15.8%
Caught in Object	162	143	96	127	113	641	8.9%
Struck Against Object	62	48	36	45	43	234	3.2%
Rubbed or Abraded	15	10	4	12	12	53	0.7%
Other Contact with Object/Equipment	1	1	3	10	11	26	0.4%
Bodily Reaction and Exertion	**403**	**374**	**340**	**456**	**419**	**1,992**	**27.6%**
Overexertion	235	206	167	204	204	1,016	14.1%
Bodily Reaction	131	140	136	190	166	763	10.6%
Repetitive Motion	21	19	25	48	31	144	2.0%
Other Bodily Reaction/Exertion	16	9	12	14	18	69	1.0%
Falls	**275**	**285**	**209**	**305**	**245**	**1,319**	**18.3%**
Fall on Same Level	135	151	99	164	136	685	9.5%
Fall to Lower Level	93	104	92	110	83	482	6.7%
Other Falls	47	30	18	31	26	152	2.1%
Transportation Accidents	**143**	**145**	**107**	**147**	**119**	**661**	**9.1%**
Exposure to Harmful Substances	**84**	**79**	**61**	**103**	**119**	**446**	**6.2%**
Fires and Explosions	**18**	**20**	**5**	**16**	**13**	**72**	**1.0%**
Assaults and Violent Acts	**4**	**2**	**2**	**0**	**2**	**10**	**0.1%**
Assaults and Violent Acts by Person(s)	3	1	1	0	2	7	0.1%
Other Assaults and Violent Acts	1	1	1	0	0	3	< 0.1%
Type of Event - Unknown	**119**	**130**	**185**	**98**	**101**	**633**	**8.8%**
Total	**1,544**	**1,490**	**1,222**	**1,568**	**1,402**	**7,226**	**100.0%**

Data Source: 2004 WCB Data. Prepared by Data Development and Evaluation

In 2004, workers being struck by objects and overexertion each accounted for 14.6% of all claims in the Upstream Oil and Gas industries. These were 0.6 times and 0.3 times lower than the average percentage of injuries for these type of event categories for the whole province. The percentage of injuries in all type of event categories was lower than the provincial average, except for caught in object, other falls, and exposure to harmful substances (see Table 3.5B).

Table 3.5B
Type of Event or Exposure — Comparison 2004[6]

Type of Event or Exposure	% of Upstream Oil and Gas Industries' Claims	% of Total Provincial Claims	Number of Times Higher/Lower Than the Provincial Average
Bodily Reaction and Exertion	**29.9%**	**42.5%**	**0.4**
Overexertion	14.6%	23.2%	0.3
Bodily Reaction	11.8%	12.1%	0.5
Repetitive Motion	2.2%	5.4%	0.2
Other Bodily Reaction and Exertion	1.3%	1.9%	0.4
Contact with Objects and Equipment	**27.4%**	**24.0%**	**0.7**
Struck by Object	14.6%	12.5%	0.6
Caught in Object	8.1%	4.2%	1.0
Struck Against Object	3.1%	5.0%	0.3
Rubbed or Abraded	0.9%	1.2%	0.4
Other Contact with Object/Equipment	0.8%	1.0%	0.4
Falls	**17.5%**	**16.3%**	**0.7**
Fall on Same Level	9.7%	10.5%	0.5
Fall to Lower Level	5.9%	4.8%	0.7
Other Falls	1.9%	1.0%	1.0
Assaults and Violent Acts	**0.1%**	**1.4%**	**0.1**
Assaults and Violent Acts by Person(s)	0.1%	1.2%	0.1
Other Assaults and Violent Acts	0.0%	0.2%	n/a
Transportation Accidents	**8.5%**	**4.8%**	**0.9**
Exposure to Harmful Substances	**8.5%**	**4.3%**	**1.1**
Fires and Explosions	**0.9%**	**0.2%**	**2.6**
Type of Event - Unknown	**7.2%**	**6.5%**	**0.6**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

[6] Number of Times Higher/Lower Than the Provincial Average: 1 indicates that the injury percentage of the industries is equal to the provincial average; greater than 1 indicates that the injury percentage of the industries is higher than the provincial average; less than 1 indicates that the injury percentage of the industries is lower than the provincial average. See Appendix A for calculation details.

3.6 Duration of Disability

Duration of disability[7] is intended to reflect the severity of the effects of occupational injury and disease as reflected by the number of days off work. However, the efforts of employers to introduce modified work programs to integrate injured workers more quickly back into the workforce can have a positive impact on workdays lost.

Nearly one-third of claims resulted in a duration of disability of 10 days or less. Claims with one to five days duration represented 21.1%, and six to 10 days, 11.8%. More than a quarter of the total lost-time claims between 2000 and 2004 resulted in 51 days or more lost from work (see Table 3.6A).

Table 3.6A
Duration of Disability — Alberta: 2000-2004

Duration of Disability	2000	2001	2002	2003	2004	Total Lost-Time Claims	%
1 – 5 Days	328	299	248	357	293	1,525	21.1%
6 – 10 Days	181	192	148	181	149	851	11.8%
11 – 15 Days	118	118	82	112	92	522	7.2%
16 – 20 Days	84	79	65	64	81	373	5.2%
21 – 30 Days	126	97	79	105	115	522	7.2%
31 – 40 Days	83	83	66	74	71	377	5.2%
41 – 50 Days	81	73	53	65	75	347	4.8%
51 Days or More	405	401	347	394	339	1,886	26.1%
Unspecified	138	148	134	216	187	823	11.4%
Total	**1,544**	**1,490**	**1,222**	**1,568**	**1,402**	**7,226**	**100.0%**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

[7] The duration of disability refers to the length of time, in days, for which the worker receives wage compensation from the WCB.

In 2004, claims resulting in 51 days or more duration of disability accounted for 24.2% of all claims in the Upstream Oil and Gas industries. This was 0.9 times lower than the average percentage of injuries for claims of this duration for the whole province. The percentage of injures in all duration categories was lower than the provincial average (see Table 3.6B).

Table 3.6B
Duration of Disability — Comparison 2004[8]

Duration of Disability	% of Upstream Oil and Gas Industries' Claims	% of Total Provincial Claims	Number of Times Higher/Lower Than the Provincial Average
1 – 5 Days	20.9%	37.0%	0.3
6 – 10 Days	10.6%	13.0%	0.4
11 – 15 Days	6.6%	7.3%	0.5
16 – 20 Days	5.8%	4.8%	0.6
21 – 30 Days	8.2%	7.0%	0.6
31 – 40 Days	5.1%	4.9%	0.6
41 – 50 Days	5.3%	3.7%	0.8
51 Days or More	24.2%	14.8%	0.9
Unspecified	13.3%	7.3%	1.0

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

[8] Number of Times Higher/Lower Than the Provincial Average: 1 indicates that the injury percentage of the industries is equal to the provincial average; greater than 1 indicates that the injury percentage of the industries is higher than the provincial average; less than 1 indicates that the injury percentage of the industries is lower than the provincial average. See Appendix A for calculation details.

SECTION 4

CERTIFICATE OF RECOGNITION EMPLOYERS

A Certificate of Recognition (COR) is given to employers who develop health and safety programs that meet established standards. Certificates are issued by Certifying Partners and are co-signed by AHRE[9].

In 2004, 7.2% of Upstream Oil and Gas industries' employers were COR holders. These employers represented more than half of the total person-years in the Upstream Oil and Gas industries. The Well Servicing with Service Rigs sub-sector had the highest proportion of CORs. Over thirty-four percent of Well Servicing with Service Rigs employers had valid CORs in 2004, which accounted for 87.3% of all person-years in this sub-sector (see Table 4.0).

Table 4.0
Employers With Valid COR — Alberta: 2004

Sub-Sector	Number of Certified Employers	Total Number of Employers	% of Total Employers Certified	% of Total Person-Years Certified
Drilling of Oil and Gas Wells	30	126	23.8%	90.1%
Well Servicing with Service Rigs	47	138	34.1%	87.3%
Downhole and Other Oilfield Services	448	5,713	7.8%	70.0%
Oilfield Trucking Services	132	912	14.5%	67.6%
Oilfield Maintenance and Construction	135	1,052	12.8%	58.7%
Petroleum Producers/Exploration	71	4,005	1.8%	32.6%
Tar Sands	2	49	4.1%	29.5%
Upstream Oil and Gas Industries	**865**	**11,995**	**7.2%**	**53.3%**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

[9] For more information on the COR program visit www.gov.ab.ca/hre/whs/partners

Between 2003 and 2004, employers in the Upstream Oil and Gas industries experienced a decrease in their lost-time claim rate. The lost-time claim rate for COR holders in Upstream Oil and Gas decreased by 26.1%, while the rate for non-COR holders decreased by 16.7%. For the province, both employers with a valid COR and non-COR holders experienced a 10.3% reduction in their lost-time claim rates (see Table 4.1).

Table 4.1
Lost-Time Claim Rate for Upstream Oil and Gas COR Holders — Alberta: 2003 and 2004

		Upstream Oil and Gas Industries				Province			
Employer	Year	LTCs	Person-Years	LTC Rate	Change in LTC Rate	LTCs	Person-Years	LTC Rate	Change in LTC Rate
COR	2003	1,031	45,717	2.3	-26.1%	10,906	374,757	2.9	-10.3%
	2004	924	53,799	1.7		10,522	403,984	2.6	
Non-COR	2003	537	45,237	1.2	-16.7%	25,669	888,356	2.9	-10.3%
	2004	478	47,127	1.0		24,597	949,230	2.6	

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

OCCUPATIONAL FATALITIES

In 2004 the WCB accepted 14 fatalities in the Upstream Oil and Gas industries, accounting for 11.3% of all 124 fatalities in the province.

An occupational fatality is defined as the death of a worker that results from a work-related event or exposure. Beginning with this year's report, all fatalities will be classified by type based on the WCB classification standards. In previous years, fatalities by type had been classified by Alberta Human Resources and Employment (AHRE). For this reason, fatalities by type statistics in this report may differ slightly from numbers presented in previous reports. The WCB classifies occupational fatalities into three general types:

Motor Vehicle Incidents

Motor vehicle incidents typically involve non-industrial vehicles operating on public roads in which the fatally injured worker was either the driver or a passenger. This type of occupational fatality also includes cases involving aircraft, train, helicopter and water vehicle crashes. In 2004, 28.6% of the Upstream Oil and Gas fatalities accepted by WCB were motor vehicle incidents (see Table 5.0).

Workplace Incidents

Workplace incidents consist of cases in which the worker died at a worksite or as a result of injuries sustained at a worksite. This is the type of fatality that AHRE typically investigates. In 2004, half of all Upstream Oil and Gas fatalities accepted by WCB were workplace incidents (see Table 5.0).

Occupational Disease

Occupational disease fatalities consist mostly of recognized occupational disease, that is, disease known to be primarily or exclusively work-related. This category also includes heart attacks suffered on the job. Occupational diseases are frequently diagnosed several years after the initial or crucial exposure to the toxic substance and in such cases, it is difficult to determine when the fatal exposure occurred. *The occupational disease category, therefore, should not be interpreted to reflect present worksite hazardous conditions or exposures.*

Each year the WCB accepts some occupational fatality claims for compensation. Occupational fatality claims that were accepted in a particular year may include fatalities from prior years. In 2004, 21.4% of the fatalities accepted by WCB were occupational disease incidents (see Table 5.0).

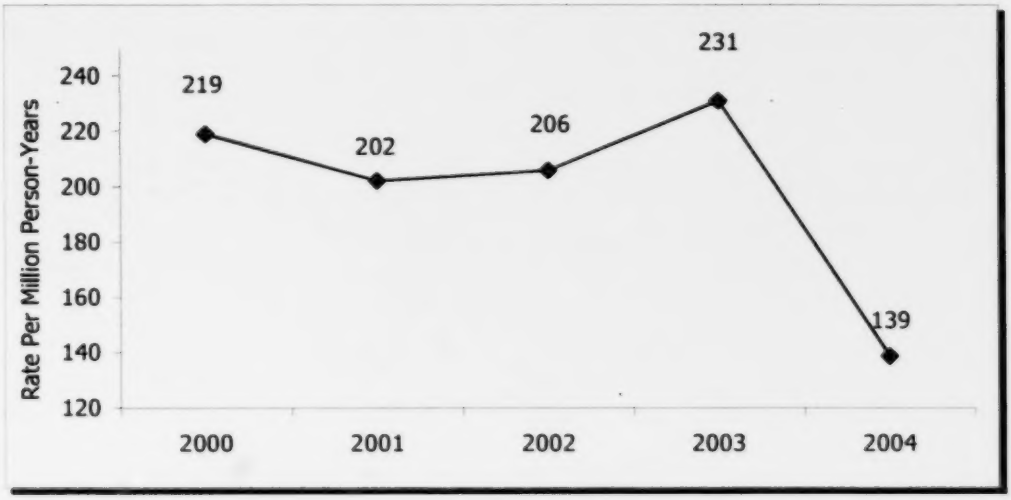
Table 5.0
Types of Occupational Fatalities Accepted by the WCB – Alberta: 2000-2004

	Occupational Disease		Motor Vehicle Incidents		Workplace Incidents		Total
Year	Number of Fatalities	%	Number of Fatalities	%	Number of Fatalities	%	Number of Fatalities
2000	2	12.5%	6	37.5%	8	50.0%	16
2001	0	0.0%	7	41.2%	10	58.8%	17
2002	6	33.3%	7	38.9%	5	27.8%	18
2003	5	23.8%	10	47.6%	6	28.6%	21
2004	**3**	**21.4%**	**4**	**28.6%**	**7**	**50.0%**	**14**
Total	16	18.6%	34	39.5%	36	41.9%	86

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation
Note: Data presented is based on WCB classification

The fatality rate is calculated by dividing the number of accepted fatalities in the year by the number of person-years in that year. The result is expressed as "per million person-years." The 2004 fatality rate was 139 per million person-years, a decrease of 39.8% from 2003 (see Chart 5.0).

Chart 5.0
Fatality Rate[10] in Upstream Oil and Gas Industries 2000-2004



Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

[10] Estimates are based upon information provided by the WCB. Fatalities occurring under Government of Canada jurisdiction are excluded from the calculation of the fatality rates.

Between 2000 and 2004, the WCB accepted 86 fatalities in the Upstream Oil and Gas industries. The Downhole and Other Oilfield Services sub-sector had the most with 25 accepted fatalities, accounting for 29.1% of total fatalities (see Table 5.1).

Table 5.1
Upstream Oil and Gas Occupational Fatalities Accepted by the WCB by Sub-Sector – Alberta: 2000-2004

Sub-Sector	2000	2001	2002	2003	2004	Total Number of Fatalities	%
Downhole and Other Oilfield Services	4	3	9	3	**6**	25	29.1%
Petroleum Producers/Exploration	4	3	3	6	**2**	18	20.9%
Drilling of Oil and Gas Wells	3	5	2	6	**2**	18	20.9%
Well Servicing with Service Rigs	3	4	2	2	**3**	14	16.3%
Oilfield Trucking Services	2	1	1	4	**1**	9	10.5%
Tar Sands	0	0	1	0	**0**	1	1.2%
Oilfield Maintenance and Construction	0	1	0	0	**0**	1	1.2%
Upstream Oil and Gas Industries	**16**	**17**	**18**	**21**	**14**	**86**	**100.0%**

Data Source: 2004 WCB Data, Prepared by Data Development and Evaluation

A

APPENDIX A: TERMS, DEFINITIONS AND FORMULAS

Lost-Time Claim

A lost-time claim (LTC) is a claim for an occupational injury or disease which disables the worker beyond the day of injury. Included are claims for which wages compensation are paid, permanent disability claims, fatalities and cases in which the injured worker is assigned light duties or other modified work upon return to work from time lost due to injury.

Person-Years

Person-Year estimates are calculated from wage and payroll data provided by account holders to the WCB. Alberta Human Resources and Employment uses this data to estimate an average industry wage and uses the average industry wage and employer payroll data to estimate person-years for each employer and each industry. One person-year is equivalent to one full-time worker working for one year and can be assumed to equal 2,000 hours worked.

LTC Rate

The lost-time claim (LTC) rate is calculated by dividing the number of lost-time claims by the person-year estimate and multiplying the result by 100. The LTC rate represents the probability or risk of disabling injury or disease to a worker during a period of one-year work. Comparisons of LTC rates between industries or between years can be used to indicate increases, decreases or differences in this risk.

$$\text{LTC Rate} = \frac{\text{Number of LTCs} \times 100}{\text{Person-Years}}$$

Duration (Days Lost)

The duration of disability is the number of days following the injury or disease for which the worker was disabled and unable to perform normal work duties. This information is obtained for this report from data on compensation days paid on each claim from WCB. Alberta Human Resources and Employment obtains this data on March 31 of the year following the claim year and does not update the information, even though many injured workers continue to be disabled beyond this date. As a result, the duration information reported here underestimates the true impact of lost-time injury and disease.

Duration Rate

The duration rate is calculated by dividing the number of workdays lost (disability days) by the person-year estimate, and multiplying by 100. The result is expressed as days lost per 100 person-years and indicates, in part, the economic impact of occupational injury and disease. Duration rates are not recommended as reliable indicators of full economic cost. In addition, readers are warned that duration rates are highly unstable when based on only a few lost-time claims; it is recommended that the duration rate not be calculated based upon fewer than 30 lost-time claims.

$$\text{Duration Rate} = \frac{\text{Disability Days} \times 100}{\text{Person-Years}}$$

Cost of Claims

Compensation cost of a claim is the reimbursement of full or partial lost wages that a worker received from the WCB due to occupational illness or injury.

WCB Accepted Fatality

An occupational fatality is the death of a worker which resulted from a work-related incident or exposure and which has been accepted by the WCB for compensation. A fatality is counted in the year it is accepted.

Fatality Rate

The fatality rate is calculated by dividing the number of accepted fatalities by the person-years estimate and multiplying the result by one million. The result is expressed as fatalities per million person-years. Fatalities that are found under the jurisdiction of the Government of Canada are excluded before the calculation of the fatality rate.

$$\text{Fatality Rate} = \frac{\text{Number of Fatalities} \times 1{,}000{,}000}{\text{Person-Years}}$$

Number of Times Higher/Lower than the Provincial Average

The number of times higher/lower than the provincial average is used to compare the performance of the industries with the province regarding specific injury or disease. A number less than one indicates that the injury of the industries is lower than the provincial average; if equal to one it indicates the injury of the industries is the same as the provincial average and a number greater than one indicates that the injury of the industries is higher than the provincial average.

$$\frac{\text{Percent of Total Claims for the Industries} \times \text{Industries' LTC Rate}}{\text{Percent of Total Claims for the Province} \times \text{Provincial LTC Rate}}$$

Where:

Percent of Total Claims for the Industries =

$$\frac{\text{Number of LTCs for the Industries (e.g. back injury)} \times 100}{\text{Total LTCs for the Industries}}$$

Percent of Total Claims for the Province =

$$\frac{\text{Number of LTCs for the Province (e.g. back injury)} \times 100}{\text{Total LTCs for the Province}}$$

NEC Means 'Not Elsewhere Classified'.

UNS Means 'Unspecified'.

B

APPENDIX B: UPSTREAM OIL AND GAS WCB INDUSTRY CODES[11]

1. Petroleum Producers/Exploration

06300 – Oil and Gas Exploration and Development – Upstream Operations
09200 – Seismic Geophysical and Mineral Exploration

2. Oilfield Maintenance and Construction

06304 – Oilfield Construction and/or Maintenance (Upstream of Processing Plants)

3. Well Servicing with Service Rigs

09903 – Well Servicing with Service Rigs including Power Swivels

4. Drilling of Oil and Gas Wells

09600 – Drilling of Oil and Gas Wells

5. Downhole and Other Oilfield Services

06305 – Field Production Operators
06306 – Vacuum Removal of Waste – Industrial, Commercial and Oilfield
09201 – Shot Hole Drilling
09900 – Mud Logging
09902 – Pressure Cleaning Services
09904 – Rathole Drilling and Service Rig Anchoring
09911 – Oilfield Downhole Services
09915 – Well Casing Services
09921 – Servicing Christmas Trees on Oil Wells by Means of a Tree Saver
09927 – Liquid Waste Treatment and Disposal

6. Tar Sands

06600 – Mining and Processing of Bituminous Sand for Oil Extraction
06601 – Research and Development, Oil Sands and Heavy Oil Recovery

7. Oilfield Trucking Services

50720 – Oilfield Trucking Services

[11] Codes are the Workers' Compensation Board – Alberta 2004 industry codes.

CONTACT INFORMATION

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